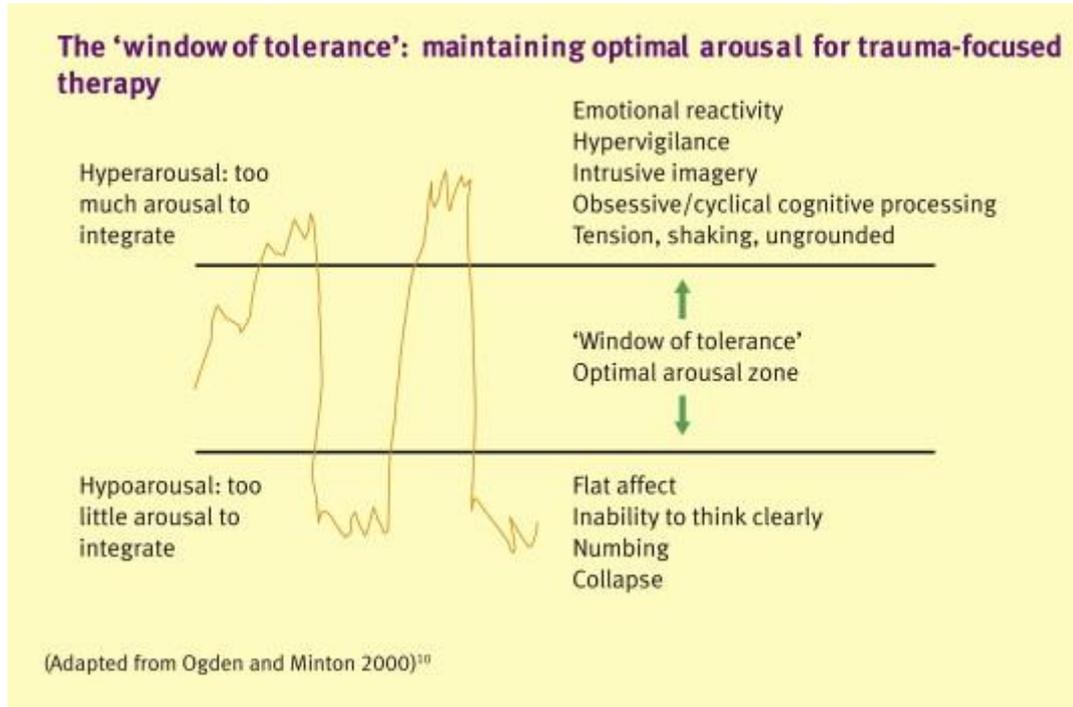


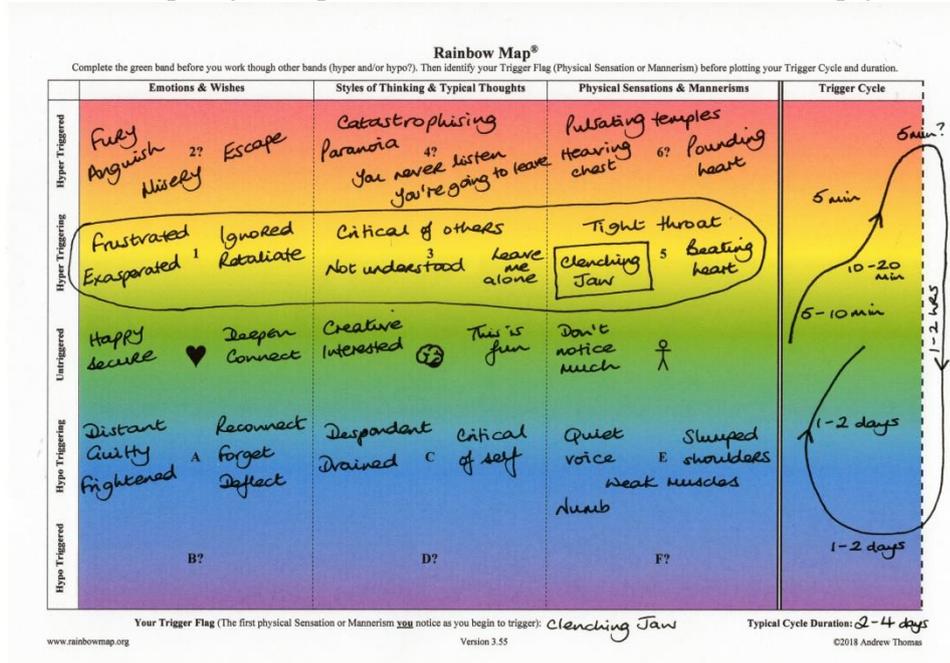
The Rainbow Map

Building on Siegal's Window of Tolerance

This short paper offers two scenarios from our evolutionary history that give rise to hypotheses that have influenced the development and design of the Rainbow Map and specifically the yellow and blue “triggering” bands. These bands represent an expansion of the lines that separate the optimal arousal and the hyper and hypo arousal bands in Daniel Siegal’s Window of Tolerance.



The Rainbow Map also differs from Siegal’s Window of Tolerance in the way it has three columns representing a human’s capacity to experience and notice their intra and extra psychic environments.



No claims are made in this paper as to the degree of certainty of the link between these evolutionary hypotheses and human nature today. Their influence on the Rainbow Map's design and the reported resonance the tool and the CPD have with both therapists and subsequently with their clients suggests that perhaps the hypotheses may have some validity. The other outcome of this work has been to offer an alternative theory base as to why clients experience therapeutic outcomes through approaches such as EMDR and psychotherapeutic approaches linked to trauma/PTSD.

Both scenarios are set hundreds of thousands of years ago and involve **non-identical twins** (Twin A and Twin B) who lived with their mother and family group in a cave. A fruit bush grew outside the cave bearing, on its lower branches, nutritious oval green berries and a few mixed colour green and brown berries. Higher up on the bush grew poisonous oval red berries of the same shape and size as the berries lower down. Eating one red berry would kill a grown man.

Scenario 1 starting point: Twin A and Twin B are 12 months old. They can toddle but have yet to articulate a word, their cognitive abilities are largely nonverbal.

1. Mother and Twin A are picking green berries at the bush when the mother notices Twin A pick a low hanging red berry. The Mother screams in alarm and fear at Twin A and she knocks the berry out of his hand. He howls with fear and surprise and rushes to his mother holding her leg. She picks him up and soothes him.

Hypothesis 1: In that instance within Twin A the learning system I am calling the **Trauma Based Learning System (TBLS)** creates a **Trigger Package (TP)** made up of a Neural Filter and A Neural Router. The Neural Filter sits within the stream of information, equivalent to approximately 10 million bits per second, entering the nervous system from outside and within the body. If that information is like the information available at the time the Trigger Package was created, then the Neural Filter clogs and triggers the Neural Router which will cause Twin A to experience similar emotions and sensations as he experienced at the time the TP was created.

2. The next day Mother and Twin B are picking green berries and the same sequence of events occurs including the creation of a Trigger Package (TP) by Twin B's Trauma Based Learning System (TBLS).
3. A seven-year drought hits the area and the bush does not bear any fruit over that period.
4. The drought ends, the bush bears fruit again.
5. Twin A (who is now 8yrs old) finds the bush and starts to pick the fruit. He reaches for a red berry and the shape and colour of the berry sends information that clogs the neural filter associated with the event seven years earlier. The Neural Router triggers causing Twin A to feel alarmed and fearful, he pulls his hand away and continues to pick the safe berries.
6. Next day Twin B also finds the bush and starts to pick the fruit. He reaches up for the red berry. Over the seven years his TP has faded away through disuse. He picks the red berry, eats it and dies.

Hypothesis 2: The feeling of discomfort experienced by Twin A has no verbally based cognitive connections because that Trigger Package was created before that type of cognition was available in his reflective mind and reactive brain/body system. The Neural Router connects areas of the brain

that generate emotions and sensations with no language-based component. Twin A may create a higher-level language based cognitive component if he experiences these emotions and sensations when he is older which may then modify and remain connected after the TP closes again.

Hypothesis 3: Twin B's DNA does not pass into the next generation. Twin A's does thereby reinforcing the DNA sequence that promotes the endurance of Trigger Packages in the general population. These remain available for years, decades perhaps the rest of a person's life once the TBLs creates a Trigger Package. It is constantly available to be opened and flood the person with the sensations and emotions and in some cases narratives that they experienced when the Trigger Package was first created or subsequently when it was reconditioned.

Scenario 2: Same starting point and steps 1 -5 are the same as Scenario 1.

6. Eight year old Twin A is picking berries from the bush with his Mother. He sees and reaches for a green and brown berry, for the first time, but starts to feel anxious and frightened as his TP opens due to the similarity of shape and colour to the red berry. This causes the Neural Filter to clog and open the associated Neural Router. His mother notices his anxiety and fear and comforts him telling him that the green and brown berries are safe.
7. Next day Twin A is out picking berries by himself. He reaches for a green and brown berry, feels anxious and fearful but not to the extent of the day before, he also recalls his mother's reassuring words. He picks the berry and eats it.

Hypothesis 4: Trigger packages can be modified when they are activated but remain fixed and unavailable for reconditioning when they are dormant.

8. The next day Twin B is picking berries from the bush with his Mother. He reaches for a green and brown berry but feels anxious and frightened as his TP opens due to the similarity of shape and colour causing the Neural Filter to clog and open the associated Neural Router. His mother notices his anxiety and fear and comforts him telling him that the green and brown berries are safe.
9. Next day Twin B is out picking berries by himself. He reaches for a green and brown berry, feels anxious and fearful to the same extent as the day before. He withdraws his hand and does not eat the green and brown berries for the rest of the summer.
10. Twin A ended the summer heavier than Twin B because of all the extra green and brown berries he ate. The following winter is hard and Twin B dies as his fat reserves eventually run out and he becomes more prone to disease than Twin A.

Hypothesis 5: Twin A's DNA, that enables TP's to be modified when activated, dominate and spread across the population.

Hypotheses 6: Part of the reason why clients with PTSD experience therapeutic change through approaches such as EMDR is due to the existence of a Trauma Based Learning system that creates Trigger Packages that are enduring but are available for modification when triggered. This claim challenges the hypothesis that therapeutic change for PTSD clients is through integration of information incorrectly processed at an emotional, somatic and verbally cognitive level. In effect PTSD may be the outcome of a natural learning process rather than being a malfunction of the information processing system. This claim has some

alignment with Prof Stephen Porges work on The Polyvagal Theory and offers a hypothesis about higher level systems that interact with the vagus system.

Hypothesis 7: The TBLS compliments the inference based probabilistic system that researchers increasingly regard as the dominant learning system in infants both before, and for perhaps the first two years after the central nervous system is developed enough to support it and until higher level verbally cognitive based learnings systems start to dominate. This domination of learning continues to be the case other than in situations where the TBLS is activated. This will be different for each of us depending on the random interaction between our genetics and the environment we grow up and live in.

Note: It is not proposed in this paper that unique structures exist within the human brain that specifically generate the functionality attributed to the Trauma Based Learning System, Trigger Packages, Neural Filters or Neural Routers. Instead it is proposed these functions are virtual systems generated by the neural pathways and how they are organised and connected within the whole reflective mind and reactive brain/body system.